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CASE OF DOUBLE VISION WITH EACH AND BOTH EYES.

[Read before the Boston Society for Medical Improvement, January 27th, 1863, and communicated for the Boston Medical and Surgical Journal.]

By G. A. BETHUNE, M.D.

Mrs. —, aged 37, the wife of a physician, and who had formerly taught in one of the highest of our private schools, consulted me first on the 10th of March, 1862. Naturally far-sighted, and without previous trouble in the eyes, eighteen months ago, after unusual exertion in studying, she was seized with double vision with each and both eyes. She suffers no pain, photophobia or other subjective symptom. This diplopia does not extend to very near objects, the nearest point being from four to five feet. The new moon she describes as seeing with four horns. The false image seems always to the left, except in the case of horizontal lines, as, for instance, a telegraph wire, when it appears below. The appearances are the same with either eye covered. By bending the head, she thinks to the left, the two images coincide. She thinks there has been no variation in the double vision since she first observed it, when the circumstances are the same. She observes it more when looking towards the sky, and in clear light, than when the light is weaker.

She is rather a delicate-looking person, though her general health is good. Her hands and feet are apt to be cold. About six months ago she was attacked with tinnitus of both ears, which still continues.

On examination, the only abnormal appearance in the eyes is a little tinea ciliaris. She was advised to rest the eyes, to apply a lotion of acetate of lead to them, and a stimulating lotion to the spine. To take sherry wine, and exercise in the open air up to her strength.

Jan. 17th, 1863.—Was again seen to-day. No change in eyes. Other things as above, except that the tinnitus has diminished. The left pupil was dilated with atropine, and the eye examined with Burrow's ophthalmoscope. Nothing abnormal seen. Two repetitions of this examination, on different days, were made with the same result, and announced to the patient. My colleague, Dr. Derby, was

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then requested to make the same examination, which he did, and made the same report to the patient as myself.

What is the cause of the double sight in this very rare and remarkable case? It is a very difficult question to answer. Is it some change in the physical formation of the eyes, which has escaped observation? Possibly, and the fact that by bending the head the images are made to coincide, would favor that supposition. On the other hand, if this is the case, the eyes must each depart from the normal to precisely the same degree, and the chances of this would seem to be very small. There is one symptom which suggests that the disease is *central*, behind the globes, and that is the *tinnitus*. This, however, has diminished, while the affection of vision remains the same. She has no trace of hysteria or nervous tendency of any kind. Moreover, it seems difficult to reconcile this supposition with our modern theory of vision.

PRACTICAL OBSERVATIONS ON, AND THE TREATMENT OF DIPHTHERIA, WITH ILLUSTRATIVE CASES.

By E. N. CHAPMAN, M.D., PROF. OF THERAPEUTICS, MATERIA MEDICA, &c.

[Communicated for the Boston Medical and Surgical Journal.—Continued from page 15.]

CASE I.—Some ten years since I saw a case of scarlet fever of a mild type, which, after the disappearance of the eruption, was attended with an exudation on the mucous surfaces of the fauces and nostrils, presenting the appearance of the diphtheritic membrane. Alum, borax and the nitrate of silver were assiduously applied for several days, without any good result, when they were discontinued, and the case trusted to nutrients and wine-whey. The indications for the change were apparent from the rapidity and softness of the pulse, the profuse perspiration, the blanched countenance and great debility. Recovery eventually took place, though the exudation lasted more than three weeks from its first appearance.

CASE II.—About seven years since, a case of scarlet fever in a child was progressing favorably, near the decline of the eruption, when, suddenly, a croupy cough set in at night. On the next morning, a well-defined and characteristic membrane could be seen in the lower posterior part of the pharynx. An emetic was given, and the nitrate of silver applied, but without any favorable change. Inspiration became more and more difficult and distressing, until the case terminated in death, on the second night, by apnoea.

CASE III.—Sixteen years since I lost a child eighteen months of age, with what appeared to be a membranous inflammation of the bronchial tubes. The cough was muffled, not ringing, the fever high, and the respiration, from the first frequent, became more rapid and distressing until death took place, in twenty-four hours from the onset of the disease. At the *post-mortem* examination, which was made

by Dr. Atwater, it was found that the air-vesicles were filled, and the bronchial tubes and trachea lined, with a false membrane. From this membrane not affecting the larynx, and from its being thicker in the smallest tubes and thinner in the larger ones, so much so that it became a mere film in the upper part of the trachea, it was evident that the disease began in the mucous tissue of the lungs, if not in the air vesicles themselves.

CASE IV.—In the second year following, another child, nine months of age, was attacked with the same symptoms, lived the same length of time, and died in the same way. Dr. McClellan, who had seen the child several times during its illness, made the autopsy. No membrane was found, or other disease of the larynx, trachea, bronchial tubes, lungs or heart to account for the oppressed respiration or for the fatal issue. My conclusion, from what I have since seen of Diphtheria, is that both children had this disease; in one the exudation was effused, in the other death took place from the state of the blood.

CASE V.—Nearly three years since I was called to a boy five years of age, who had complained of a sore throat for a week, and had had a croupy cough for forty-eight hours. His condition now was most alarming, if not well nigh hopeless: a membrane, readily seen in the throat when the tongue was strongly depressed; a pulse uncertain, running and scarcely to be counted; the surface of the body blue, and covered with a profuse, clammy perspiration; and a difficulty of respiration, which, impossible in the recumbent posture, could only be accomplished when the head and shoulders were elevated, through the aid of the voluntary muscles. Internally, senega and squills, in emetic doses, were given, and then continued in quantities short of nausea, combined with the carbonate of ammonia. The nitrate of silver— $\frac{3}{4}$ i. to $\frac{5}{8}$ i. of water—was passed into the larynx, twice the first, and once the two following days; and a blister applied over the sternum.

During the first two days, several small shreds of membrane came up on the swab, and in the matters vomited. The croupy symptoms disappeared promptly; but the recovery of the child was slow, both owing to a bronchitis that followed, and a profuse and continuous discharge from the blister. Its surface was at no time covered with a membrane, but with weak, indolent granulations, that, in spite of burnt alum and the sulphate of copper, showed no disposition to cicatrize. It was more than a month before the blister healed—a fact readily accounted for by the anæmic, feeble state of the patient. This condition was eventually removed by nourishment and tonics.

Following this case, many others were presented to my notice, mostly, however, in the Out-Door Department of the Long Island College Hospital. These, by my colleagues and myself, were treated in a variety of ways. We gave a fair trial to mercurials, in small continuous doses, and in larger ones united with purgatives;

to low diet and full diet; to diaphoretics, such as nitre and the acetate of ammonia; to the chlorate of potassa, internally and as a gargle; to fomentations and poultices external to the throat, both simple and medicated; to astringent collutoria, alum and zinc for example; to caustic applications of iodine and the nitrate of silver, &c. &c. None of these various means appeared to have a controlling power over the disease. Some of the cases, seemingly cured, returned in a few days with the membrane re-formed, and many were attended for a length of time, without any change either for the better or worse. The mortality cannot be stated, since the patients were not followed to their homes; and, if severe symptoms set in, most likely the nearest physician was called. At this period the epidemic was of a less malignant character than for the last twenty months, as was shown by a lack of a disposition to spontaneous hæmorrhages.

CASE VI.—About the time above mentioned, through the kindness of Dr. Mason, one of the Council of the College, an opportunity was afforded me of seeing a case in which the chlorate of potash was used in conjunction with nutrients and wine whey. Prof. Flint also saw the case several times, in consultation. There was hæmorrhage, several times, from the nose; a rapid, irritable pulse; a clammy perspiration and great nervous and muscular prostration. The child lived for more than a week, but eventually died from the poison of the disease, without the larynx becoming implicated. Dr. Mason informs me that the two remaining children took the disease—one severely—but recovered by a treatment similar, though somewhat more stimulating.

CASE VII.—I was called, Dec. 16th, 1860, to see a little girl 5½ years of age, of a scrofulous constitution, who had been much confined in hot, close rooms. She, for the last five days, had complained of a slight stiffness and soreness of the throat, and was languid and listless—symptoms that were supposed by the parents to arise from a cold. Both tonsils were swollen and dotted with several little circumscribed white points, apparently the mouths of the mucous follicles. The child was feverish, petulant and nervous; the pulse was soft and rapid, and the passages were dark-colored and fetid. I directed *R.* Hydrarg. submur., gr. i.; cretæ ppt., gr. viij. *M.* Fiat cht. No. viij. *S.* One every second hour until used, and then followed by a dose of castor oil.

Dec. 17th.—The fauces were more inflamed, of a deeper color, and partially covered by the coalescing white points above mentioned. The discharges from the bowels are of the same character as at first, and now hæmorrhage from the nose has shown itself. I repeated the powders and oil, applied lunar caustic—3 i. to 3 i. of water—to the throat internally, and ordered an anodyne liniment of camphor, laudanum and arnica externally.

18th.—The caustic was applied morning and evening, and a dia-

phoretic of nitre, ipecac. and the acetate of ammonia given. From the contact of the swab a dark, grumous blood flowed from the tonsils. During the night the child had bleeding from the nose several times, was feverish and somewhat delirious.

19th.—As there was no improvement in the appearance of the passages, the powders were renewed and given alternately with the mixture. The caustic and anodyne liniment were continued. There is now less heat of skin and fever; a tendency, at times, to perspiration; increasing weakness; greater tumefaction of the tonsils, which bleed, however lightly touched. Not the slightest impression has been produced, by the caustic, on the exudation.

20th.—The symptoms are all aggravated, and restlessness and jactitation are commencing. I omitted the mercurial, continued the mixture, adding camphor, re-applied the caustic and directed beef-tea.

21st.—The child's throat is filled with a bloody membranous matter of a very fœtid odor, and a suspicious, black-looking spot is observable on the uvula. The nose has bled several times in the last twenty-four hours. The child's vital power appears weighed down by a poison in her veins, and is rapidly yielding, as is becoming more evident day by day by the increased debility and prostration. Omitting other medicines, I now attempted to support the constitutional forces in the struggle, with nourishment, wine whey and quinine.

22d.—The child is in a state of semi-consciousness, sleepless, and tossing about constantly. The entire uvula has become of a black color. The same treatment continued.

23d.—The uvula was sphacelated, and the soft palate and tonsils looked darker colored, almost black. The child, in a state of constant jactitation, unconscious of those around her, sank rapidly, and died at 11, P.M., without the larynx becoming implicated.

A week after the death of this girl, her brother, two years of age, the only remaining child, took the disease, which was attended with similar and equally malignant symptoms—spontaneous hæmorrhages, exhaustion and gangrene—and was followed by death in about the same time, without the membrane extending to the larynx. These particulars I learn from the physician who attended the case. The treatment was not stimulating or sustaining.

CASE VIII.—A few days after the death of this girl, I was called to see another about the same age, who was scrofulous, fleshy, a hearty eater and delicate from confinement within doors. The child had great irritability, a high fever, a hot, dry skin, and a rapid, full pulse. Great difficulty was experienced in swallowing, from the inflamed and swollen tonsils, on one of which a membranous patch was seen. A teaspoonful of brandy and a quarter of a grain of quinine were directed to be given every hour, and the nitrate of silver was applied every morning. This treatment was continued,

uninterruptedly, for four days; when, on the disappearance of the membrane, the quinine and caustic were omitted and the brandy given singly. This was to prevent a relapse, in which it was successful, and to correct the altered state of the blood. On the morning of the second day of the disease the fever was lessened, the skin disposed to perspiration, and the swallowing was easier, though the membrane had extended and the tonsils were darker colored and bled when roughly touched.

On the third day there was a great improvement in the symptoms—diminished vascular excitement, the membrane stationary, looking thicker, more raised and of a yellowish color.

On the fifth day the engorgement of the tonsils had subsided, and the membrane had disappeared.

CASE IX.—Master F., aged 6 years, living in State St., one of the healthiest locations in the city, and allowed to exercise freely in the open air, took the diphtheria, with symptoms nearly identical, as to fever, pulse, state of the tonsils and extent of the exudation, with those observed in the last case. The boy was scrofulous, but not sickly, and had had the scarlet fever. This case being trusted to brandy and quinine, the same diminution of the fever, subsidence of the swollen tonsils, and limitation to the extension of the membrane, were observed as in the last case. Recovery took place in five days. This boy, though remaining perfectly well during the interval, was attacked again in the latter part of September following, and died from the poisoned state of his blood.

CASE X.—The lady of a physician was taken with the Diphtheria a year ago last March. She is constitutionally feeble and scrofulous, of a consumptive tendency, and never enjoying even tolerable health. A patch of exudation appeared on one tonsil, with slight redness but considerable irritation of the throat. There was no fever, and but little general disturbance beyond what might be accounted for by a high nervous excitement at the dread of this terrible complaint. For the first forty-eight hours the treatment consisted mainly of the nitrate of silver and tincture of iodine, which were applied energetically to the seat of the membrane. This would fall, but in a few hours be replaced. After the last cauterization the membrane, in three or four hours, spread to the posterior part of the pharynx. This result followed so rapidly as to render the sequence between cause and effect apparent to the doctor, and myself who now for the first time saw the case. We now determined on discontinuing all local medication except demulcents, and relying on brandy and quinine. Some twenty grains of quinine were given during the next twenty-four hours, which very speedily caused ringing in the ears. The brandy was taken in small quantity, only one teaspoonful every third hour. The cure was most rapid and prompt. The membrane disappeared in three days, and no relapse has since occurred. Mrs. — for some time subsequently had great weakness of the lower extremities, almost a

total inability to rise when sitting; evidently a partial paralytic condition. This in four or five weeks entirely disappeared. This lady had had the scarlet fever.

CASE XI.—Master C., aged 6 years, scrofulous, small in stature, and of defective vital power, was attacked with the most intense congestion and inflammation of the tonsils, and had a bounding, rapid pulse of 120 pulsations per minute, and a high fever. On the second day the symptoms were aggravated; especially the condition of the throat, which was now hard and swollen in the parotid region. The mucous follicles of the tonsils were distended with a white matter, giving them the appearance they present in follicular inflammation, which disease it was supposed to be and treated accordingly with diaphoretics, &c. On the third morning these white points had united, covering the tonsils uniformly. The entire fauces were more inflamed, had a darker hue, and were disposed to bleed on examination. There had been nose-bleed the previous night. The fever was high, the restlessness and irritability very great, and the pulse 150 per minute.

The boy was now put upon brandy and quinine; the former, at first, in teaspoonful doses every second hour, then every hour, but eventually every half hour; the latter in quantities of six grains in the twenty-four hours, the first three days, when, on the supervention of tinnitus aurium, the dose was lessened. A portion of quinine was taken for five days, but after this period only stimulants and nourishment were given. At the outset, beef-tea was ordered; but, from the difficulty of swallowing, little was taken during the height of the disease. The parents were enjoined to be particular in administering the amount of stimulant directed, whatever else might be neglected. During a part of the treatment the patient took a weak solution of chlorate of potash, given more for the purpose of bathing the throat as it was swallowed, than from any reliance on its systemic effects.

The second day after commencing the use of brandy and quinine there was the following condition: the fauces uniformly covered with membrane, the fever and heat of skin gone, the surface bathed with perspiration, and the pulse equally rapid as at first.

On the third day there was a profuse perspiration, a more rapid pulse, an oozing of blood from the tonsils, epistaxis and greater evidences of prostration, as shown by restlessness and jactitation. Though the quantity of brandy now given was large, the effects of a stimulant were not observable. In the evening I gladly availed myself of the counsel of my colleague, Prof. Flint, both to gain the benefit of his large experience and to calm the excitement of the terror-stricken parents. The course hitherto pursued was approved of and continued. Subsequently we were both in attendance until the patient convalesced.

On the fourth day the membrane was detached at several points, was raised, thicker, yellowish, and appeared as though it would soon

fall off. The inflammation had subsided so much that the act of swallowing was more easily effected; yet the pulse was still soft and rapid, the weakness extreme and the sweating profuse and exhaustive.

From this date the improvement was rapid, the membrane hanging in shreds and finally dropping off, and the engorgement of the throat subsiding, so that the parts resumed their natural appearance.

On the ninth day the membrane disappeared and has not since returned. On account of the debility of the patient, the brandy was continued for some time after my attendance was discontinued. Under its use the child recovered from the debility so characteristic of this disease, and regained his wonted health.

[To be continued.]

DIAGNOSIS OF THE MALARIAL DIATHESIS.—NEW TEST SYMPTOM.

[The following interesting paper on a new pathognomonic symptom of the malarial diathesis has been placed in our hands by Surgeon-General Dale, to whom it was communicated by Surgeon E. C. Bidwell, of the 31st Massachusetts Volunteers.—Eds.]

The diagnosis of ordinary intermittent fever is by no means difficult. Its strongly contrasted phenomena—chill, fever, sweating and intermission—their regular and orderly succession and stated occurrence, constitute together such a peculiar *tout ensemble* as not to be easily mistaken. But it is not every case of disease arising from malaria that wears thus openly the marks of its origin. Often some one or more of the stages of this *curriculum* are materially modified or entirely omitted, or their usual order disturbed; and there are many morbid manifestations of the same diathesis whose features bear so little resemblance to the original portrait as scarcely to be recognized by familiar acquaintances. There are yet more difficult cases in which the same diathesis complicates and perpetuates other pre-existent or accidental diseases, without betraying itself by any of the signs by which it is usually recognized. Even periodicity, at once the most constant and characteristic of its external features, sometimes fails to furnish its accustomed clue. That such cases should not unfrequently escape successful treatment through lack of recognition, is of course. As they arise from the specific cause of intermittent, they require the specific treatment of intermittent. Quinine cures them, while symptomatic remedies fail. How to detect the malarious element in these cases is therefore a question of great interest and practical importance to our army and its medical officers. The subtle malaria of the rebel soil destroys and disables more Northern soldiers than all the wounds received from rebel arms.

It is to aid in the detection of the influence and workings of this

wide-spread and insidious poison, that a pathognomonic symptom, not well known to the profession, is here described. It is a very peculiar and abnormal appearance of the tongue, in which its under surface appears to have trespassed upon the upper, the *papillæ* of the latter being supplanted by the transverse *rugæ* of the former. The sides are thickened and rounded, the normal well-defined edge being obliterated, and the line of demarcation moved nearer to the mesial line. This appearance of the sides may be associated with any and every possible appearance of the remaining papillary surface, clean or coated, thick or thin, light or dark, just as the malarious disease may be attended by any and every variety of morbid condition of the system. Through all this variety it is perfectly distinct, and, when once learned by actual inspection, is unmistakable.

Wherever I find this malarious tongue, whatever other symptoms and conditions may be present, I give quinine freely and confidently. So much confidence do I place in its indications that, when it is present in complicated or obscure cases, I make all other treatment wait upon quinine as the first and indispensable remedy. On the other hand, when in charge of a regiment, if soldiers came to me complaining of "chills," whose tongues did not present this appearance—telling the truth to the eye while they lied to the ear—they were unhesitatingly returned to duty. I am confident that in judging by this criterion of more than twelve hundred cases during the last season, I have never wronged more than two men, and those not grievously. In those two cases, I am obliged to confess, it was but faintly developed. Both were mild cases of simple intermittent. The remark that the appearance now described is an unfailing indication for the quinine treatment, is not to be understood as implying that such treatment is to be continued until the symptom disappears. That is not necessary nor advisable. Relief and amendment do not wait for its disappearance—nay, even come some days in advance of it.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JAN. 12th.—*Gun-shot Wounds of the Arm, followed by Anæsthesia of part of the Hand.*—Dr. W. E. TOWNSEND reported the two following cases, which came under his care in the Mason General Hospital.

I.—Private Wm. T. Wells, Co. C, 16th Reg't Mass. Vols., was wounded at Fair Oaks, on the 18th of June, 1862, by a conical ball entering the right forearm on its posterior aspect, three inches below the olecranon, and making its exit an inch anterior to the internal condyle of the humerus. The hæmorrhage was not very severe, and con-

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tinued only twenty or thirty minutes. No spicula of bone came away, although it would seem, from the position of the entrance and exit, that the ball was slightly deflected from its course. After leaving the arm, the ball entered the right side, fracturing the tenth rib, a small spiculum of which was afterwards removed from the wound.

The sensation in the fore-arm, on the radial side, is *nearly* natural, though diminished on the ulnar side. It is natural in the whole of the thumb, index and second fingers, as well as the radial half of the palm. There is partial sensation in the ring finger and the portion of the palm opposite, but it is wholly wanting in the little finger and the portion of the palm corresponding. On the dorsum of the hand the sensation is natural, except over the heads of the carpal bones of the index and second fingers. In the ring finger it is partial, but in the little finger it is wholly wanting.

The size of the fore-arm is diminished, and the hand, the ring and little fingers, together with the ulnar side of the palm, are much atrophied. The strength of the fore-arm is diminished, and that of the hand, the ring and little fingers is entirely gone. The color of the arm is natural, but the hand, the ring and little fingers are livid, accompanied with coldness. The wound is entirely healed.

II.—Private John A. Lyons, Co. A, 28th Reg't Mass. Vols., was wounded at Antietam, Sept. 17th, 1862, by a conical ball entering the inside of the right arm, two and one half inches above the internal condyle of the humerus, and making its exit four and one half inches above the external condyle, and about an inch exterior to the anterior median line. The humerus was wounded, as two spicula of bone, about two inches in length, came away soon after. The wound bled profusely for some thirty or forty minutes, and somewhat for about an hour and a half, after which there was no hæmorrhage, although the wound was not dressed for four or five hours.

The sensation is perfect in the whole of the arm, but ceases entirely in the thumb and first four fingers. It is natural in the little finger and the portion of the palm opposite, and partial in the palm opposite the ring finger, but there is no sensation in the ulnar side of the ring finger. The sensation on the dorsal side of the hand is natural—partial over the first bones of the phalanges, and wholly absent over the last bone of the thumb and the last two bones of the fingers.

The motion is quite good in the carpal portion of the thumb, but there is none in the other joints. The motion of the little finger is natural, the ring and second have less, while the index has none, except in the carpal portion, and that slight. There is some stiffness in the elbow-joint and also in the wrist. There is no loss of size in any part. The color of the arm is natural, as also of the little finger, but the other fingers, and the thumb, together with the radial side of the palm, are livid.

There is pain along the whole extent of the ulna, especially if the arm is heated either by exercise or artificial heat. The wound is entirely healed.

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CALCAREOUS METASTASIS.—At a recent meeting of the Society for Medical Improvement, an interesting case of caries of the head of the femur was reported, in which, after death, the kidneys, although of a perfectly normal appearance, were found by microscopic examination to be diseased throughout, the tubules being everywhere enlarged and crowded with granular matter. In the discussion upon the case which followed, Dr. Ellis, who made the *post-mortem* examination, remarked upon the connection which had been noticed by Prof. Virchow between similar affections of the bones and a diseased condition of the kidneys in cases of so-called calcareous metastasis. As disease of the kidneys was excluded during the examination on account of their healthy appearance, it appears that attention was not particularly directed to a search for any calcareous deposits in this case, and probably none such were present; but it may be interesting to our readers to know that such metastases may take place without the presence of any disease of these organs, as the following case recently reported by Dr. Schott, the assistant of Prof. Rokitsky, shows.*

“ Since attention has been more particularly directed to the processes of metastasis, especially those produced by emboli, we see our knowledge of this subject almost daily increased by new examples. Cases, however, in which metastases take place for the reason that matters, which ought to be separated from the body by secretion, are deposited in the tissues of other organs again through imperfect elimination, claim our interest in a high degree on account of their infrequency. Well-known examples of the latter kind are the occurrence of gouty concretions and the abundant separation of carbonate of ammonia in the stomach by retention of the urea; to the more infrequent and only very recently perfectly described forms we must add the deposition of lime salts, Virchow’s calcareous metastasis, in the stomach, intestinal canal, lungs, &c. It may appear justifiable, therefore, to describe here, in detail, as an addition to our knowledge of calcareous metastases, a case which I have recently had opportunity to observe.

“ The examination of a child, *æt.* 18 months, who died four days after being driven over, revealed, together with extravasation of blood into the abdominal cavity, a detachment of the intervertebral cartilage between the first and second lumbar vertebrae, so that the vertebral column by this means obtained an abnormal mobility. The under surface of the first lumbar vertebra thus exposed was rough, discolored, and contained superficially in the enlarged medullary cavities a purulent fluid; the *dura spinalis* appeared thickened, injected and ecchymosed, the spinal marrow unchanged. The lumbar muscles, as well as the cellular tissue about the kidneys, engorged with blood; the walls of the small intestine remarkably thin, its follicles swollen, the mucous membrane, as well as that of the ascending colon, rough to the touch in places like sand. After removal of the mucus the mu-

* Wochenblatt der Zeitschrift der k. k. Gesellschaft der Aerzte zu Wien. Oct. 15, 1862.

cous membrane appeared here and there covered with white, round scales of the size of poppy seeds, which were enclosed within it, and in the transparent small intestine followed principally the course of the ramifications of the vessels.

"The microscopical examination of these bodies revealed irregular masses, here and there branched, sometimes fissured, sometimes supplied with round or oval openings, but more generally homogeneous, which, rendered more transparent by acetic acid, were dissolved, with a lively evolution of gas, by the addition of hydrochloric or sulphuric acid.

"They appeared, therefore, from their chemical behavior, to be deposits of calcareous matter, occurring only in the upper layer of the mucous membrane and upon the vessels in the form of molecules, while the glands remained free.

"The presence of lime salts being determined, there remained to be answered the question as to the cause of their deposition. If we consult the older authors in this relation, we find, indeed, cases of ossification of the walls of the intestine cited, but no regard paid to the aetiological circumstances of such processes. For instance, Sömmerring mentions a case, where in a child the inner surface of the intestine was ossified. Meckel refers to two observations made by Baillie, in one of which bony substance was deposited upon the inner intestinal wall, in the other there was a growing together of two neighboring portions.

"It does not appear that these cases are to be considered as calcareous metastases in the sense of Virchow, but rather that they were formations of plates of bone in the cicatrix of a mucous membrane, as described by Rokitsansky (*Path. Anat.*, II. Vol., p. 270, 1842).

"The literature of the present day contains comprehensive observations upon these metastases and the nature of their origin. In Virchow's *Archiv.*, Vol. VII., p. 160, Schlöfper communicates such a case, where calcareous masses were found deposited in the gastric mucous membrane of a young man suffering from necrosis femoris. Virchow (*Archiv.*, Vol. VIII., p. 103, and Vol. IX., p. 618) mentions six cases of so-called calcareous metastasis in the lungs, the stomach and the intestinal canal, in which caries or cancer of the bones was present. According to the communication of Grohe (*Virch. Archiv.*, Vol. XIII., p. 277) such deposits were found in the large intestine of a person who died of tuberculosis and meningitis, and he ascribes the deposition to atrophy of the cranium produced by pachymeningitis. Virchow thereupon (l. c.) calls attention to the fact, that in all the cases observed by him considerable changes had taken place in the kidneys: 'that this disturbance must be looked upon as an essential element in the calcareous deposit, inasmuch as in cases of obstructed excretion of the lime salts through the kidneys depositions of these must always take place.'

"In connection with the communication of Lorinser (*Med. Wochenschrift*, 1862, No. 40) upon inflammation of the bones, Kletzinsky demonstrated, that in the beginning of such inflammation there is, together with a diminution of the chlorides, a great increase of the phosphates in the urine, which remains constant in the dry osseous inflammation to the end of the process, whereas, when suppuration is present and a new formation of bone takes place, there is a decrease of the phosphates.

"We see, then, that in most of the cases of calcareous metastasis there is a disease of the bones accompanying, and that among all the cases mentioned by Virchow there is only one in which no source for the derivation of the lime salts was detected. If we compare our case with those mentioned above, it appears that there is indeed an affection of the bones, but that it is only in its beginning, and thus differs from the cases of other observers, in which the osseous disease had mostly lasted for a longer time, and was accompanied by occasional marked disturbances in the functions of the kidneys. In the present case, however, the kidneys showed no change whatever: there is wanting, accordingly, an essential cause for the calcareous deposit, namely, the affection of the kidneys, a circumstance which would at all events afford us an easy explanation, inasmuch as it will be readily understood that even in case of a short duration of the affection, in consequence of a disturbance of the functions of the kidneys, the lime salts might be deposited in the parenchyma of other organs. If we consider the observation of Kletzensky, that an increased excretion of lime salts is demonstrable in the beginning of osseous inflammation, it follows, in cases where there is a want of disturbance in the kidneys, that the separation through the kidneys has not sufficed to remove the lime salts present in the blood, so that they become deposited in the internal organs.

"So far as the small number of cases of calcareous metastasis thus far known allow of any conclusion, such a deposition takes place most frequently in the lungs, less often in the stomach or intestinal canal. The case which we have communicated does not fail in interest therefore in this particular, which on the other hand is rather increased, inasmuch as the inflammation of the bones had not attained any marked development, while the metastasis had already reached to so considerable a degree, since such deposits often entirely fail in inflammations of the bones of very long duration, and because the affection of the bone in all other known cases of calcareous metastasis was of considerable extent and mostly of long duration."

Unfortunately for our complete satisfaction, it is not stated in the report whether a microscopic examination of the kidneys was made, although it is fair to conclude that such was the case, considering the thorough way in which *post-mortem* examinations are conducted in Prof. Rokitsky's department, and the attention which the very nature of the case would have directed to these organs. Neither should we expect the development of any diseased condition to a sufficiently marked degree to be detected during the short period which elapsed between the accident and the time of death. Analogy, moreover, teaches us that a structural change of the kidneys is by no means necessary to explain the non-elimination at times of certain salts from the system, which are generally found in great abundance in the urine. To common salt, for instance, which may be considered the most uraphanous of any saline substance taken into the economy, these organs show themselves, under certain conditions of the general system, utterly and inexplicably impervious, even when the blood which fills their capillaries must be saturated with it. In the exudative stage of pneumonia, for example, a large quantity of this substance may be given, and yet not a trace of it be recognized in the patient's urine. How, then, in such cases, does it escape from the blood, which can never

retain more than a definite amount? We find it oozing from the capillaries of the *lungs* in company with other morbid matter, which goes to make up the exudative material of the disease, and transuding through the small vessels ramifying upon the inner surface of the *intestine*, seeking thus its nearest paths of escape from the economy. These, it will be observed, are the very same channels by which the calcareous salts, when denied exit through their usual drain—the kidneys—seek by the compensating laws of nature to be discharged. This may be the case, not only when these organs are structurally or functionally a bar to their egress, but also when overburdened by too great a quantity of the phosphates taken as food, or when the blood becomes surcharged by absorbing effete calcareous matter through capillaries ramifying in the neighborhood of carious bone. Being more insoluble, or perhaps more readily disposed to enter into stable combinations with the organic matter of the tissues upon their erratic way, this bone-earth does not so easily as the chlorides pass with the fluids into the outer world, but slowly exuding through the outer walls of the capillaries is deposited in the form of molecules upon them within the mucous membrane of the intestines and pulmonary tissue, and forms the deposits alluded to by Virchow. Let such nuclei from any cause be once deposited, and their rapid growth to concretions of a larger size is readily explained by the same law which governs the formation and increase in size of urinary and other calculi, viz., that by which the crystal grows in its mother liquor.

We see, then, that the kidneys, under certain conditions, utterly refuse to perform some of their functions, although to the pathological anatomist they would appear perfectly healthy at such times. Without attempting, however, to offer any explanation of so mysterious a phenomenon, we cite it as evidence that such metastases may be possible even without the concurrence of any structural disease of the kidneys.

STATISTICS OF 100 GUN-SHOT WOUNDS. *Messrs. Editors*.—Be kind enough to find herewith statistics of one hundred gun-shot wounds, taken at random from the records of one of the Washington hospitals, between June and October last. It is a fair average of the surgical cases treated at that hospital for those months, and may indeed be taken (so far as I remember the cases by seeing them cursorily, but frequently) as a fair average of all the surgical hospitals in Washington for the same period.

	No.	Simple flesh wounds.	Injuring bone.	Injuring large vessels or nerves.	Perforating cavity.	Amputation or other operation.	RESULT.		
							recovery.	Invalidism.	Death.
Head - - - - -	13	6	6	0	2	1	9	2	2
Neck - - - - -	6	4	0	2	0	1	4	0	2
Thorax - - - - -	8	3	2	0	5	1	4	1	3
Abdomen - - - - -	9	2	2	0	5	0	5	1	3
Arm - - - - -	19	10	8	1	0	6	12	5	2
Hand - - - - -	11	4	7	0	0	1	8	3	0
Leg - - - - -	24	19	5	0	0	4	18	2	4
Foot - - - - -	10	5	5	0	0	1	9	1	0
Totals - - - - -	100	53	35	3	12	15	69	15	16

With one hundred as the aggregate, of course the number in each class represents the percentage. These numbers include mostly the wounded from Fair Oaks and the "seven days battles." If I remember rightly, the proportion of those from Fair Oaks wounded in the lower extremities was larger and in the upper extremities smaller than the above averages; but of the wounded from the seven days battles the proportion was reversed.

Recovery, in the above list, implies such restoration as would allow future service; while invalidism requires discharge. Of those invalided, the causes assigned were:—loss of both eyes, 1; perforation of skull and frequent dizziness, 1; general debility following perforated lung, 1; loss of arm, 2; paralysis of arm, 3; loss of portion of hand, 3; paralysis of leg, 2; loss of leg, 1; loss of portion of foot, 1. Total, 15.

Of the deaths—from injury of *head*: perforating wound and laceration of brain, 1; depressed fracture, 1. *Neck*: secondary hæmorrhage from carotid, 1; from subclavian, 1. *Chest*: injury to lung and asthenia, 2; shock, 1. *Abdomen*: perforation of intestine, 1; peritonitis, 1; tetanus, 1. *Arm*: pyæmia, 1; asthenia, 1. *Leg*: pyæmia, 2; asthenia, 2. B.

EXSECTION OF THE BONES OF THE FOOT. *Messrs. Editors*.—Will you permit me to relate the following favorable case of the exsection of a portion of the bones of the foot, as it may be of some interest to yourselves or readers.

The exsection of portions of the shaft of bones, especially where articulations are involved, has been fatal in very many instances in civil practice. In military practice the fatality is much greater, e. g.; after the battles in Maryland, one surgeon had twenty exsections; eighteen of these proved fatal, two required secondary operations. Shortly after the battle of Antietam, a friend said to me, "I have performed eight exsections under what I considered favorable circumstances—none of my patients recovered. I shall not do the operation again while I am in the service."

At the battle of Fredericksburg, Serg't D., of the 12th Reg't Mass. Vols., received a gun-shot wound in the left foot; a rifle-ball entered the head of the fifth metatarsal bone, shattering it entirely. As it passed along, it took away one third of the cuboid bone, and made its exit inferiorly and posteriorly to the os calcis, without injuring the latter. I saw the case on the second day after the receipt of the injury, and as the patient was robust and pretty comfortably situated, I resolved to remove the injured portions only of the foot, rather than do Chopart's operation, as had been advised by some of my brethren.

In doing the operation, two slightly curved incisions were made, commencing at the base and inner side of the fifth toe, and terminating at a point one and one half inches from the external malleolus, anterior and inferior to it. The detached portions of bone, together with about one half the cuboid, were then removed. The operation having been carefully conducted, only one vessel required a ligature. The lateral wound was then closed with sutures, and water dressings applied. The posterior wound was left open, thus affording a free escape for the pus.

About one half of the wound made by the knife united by first

intention; the remainder, after a little sloughing in the track of the ball, granulated finely, and now the patient is almost ready to be discharged from the Hospital. Yours, respectfully,

Headquarters Med. Dep't, 12th Reg't M. V., } JOHN H. MCGREGOR,
King George Co. Va., Feb. 2d, 1863. } Ass't Surgeon.

* OBITUARY NOTICE OF DR. ASAHCL CLAPP, OF INDIANA.—Died, at New Albany, Ind., Dec. 17th, Dr. Asahel Clapp, in the 71st year of his age. Dr. C. was a native of Massachusetts, but his father's family moved, while he was yet a child, to Montgomery, Vt., whence he emigrated to New Albany in the year 1817, soon after the first settlement of that place. For many years he has been one of the leading scientific men in his adopted city and State; and in everything relating to his profession is represented to have been an enthusiast, reading every new work on medicine and surgery, and devoting much time to the study of botany and geology. In seeking practical information on these latter branches he had travelled into other States, and his collection of geological and botanical specimens is said to be the largest in Indiana. Dr. J. L. Chandler, of St. Albans, Vt., who was a fellow-pupil of Dr. Clapp, under the tuition of the father of the former, Dr. Benjamin Chandler, has kindly furnished us with the following interesting particulars respecting the early habits and traits of character of his associate:—

"When," he says, "Asahel Clapp presented himself to my father, he must have been not far from 20 years of age. He was in the rough garb of a backwoodsman, and announced his wish to commence the study of medicine forthwith. It was the custom of country physicians in those early days to receive pupils, boarding, and sometimes clothing them, trusting to their future professional success for remuneration. He signified his wish to discharge his pecuniary obligations as they accrued, by labor on the farm, or in any employment my father might furnish. He had travelled some thirty miles on foot, from a new settlement among the mountains, where he had resided from early childhood and where his ardor in the pursuit of knowledge must have been kindled. Yet his training had all been effected in the rough and brief terms of the district school of that pioneer period and mountainous region, usually taught by backwoodsmen themselves. His bearing was indicative of intelligence and good sense—of solidity rather than brilliancy. My father was quick to discover and appreciate talent, and watched its development with the gusto of an epicure. He acceded to young Clapp's terms at once. It was during my own pupilage, and though the only advantage I could claim over him was a superficial smattering of Latin, I affected profound amazement at his temerity in presuming to enter upon the study of medicine with so little preparation, especially with the draw-backs on his time by the undignified employment of 'his own hands' in catering for his daily support. My father replied to this sage announcement of my sentiments towards my fellow-pupil, that I should soon be relieved from the burden of such regrets, by finding myself amply employed in following at a respectful distance my fellow-student's lead in the acquisition of knowledge. My impartial and sagacious father's prediction was ruefully verified.

"With no special claims to genius, he had intellectual strength,

and an iron will to do what he purposed; the true secret, no doubt, of success in every department of human pursuit. His work was diligently to study and understand the elementary books in medicine, prescribed by his preceptor; his pastime, the entire fulfilment of his contract with my father, by labor on the farm; still leaving him many fragments of time, which were successfully employed in gleanings of knowledge from any source which might facilitate the study of his profession. We lodged in a room adjoining my father's study, and while my own slumbers were protracted through the early morning hours, he was up betimes, ransacking the book-shelves and making himself familiar with every writer who might, directly or indirectly, solve the questions perpetually rising in his active mind. May I be indulged in relating a laughable incident, yet really indicative of his indomitable purpose to put every opinion and every theory in science to the proof? He had taken up a small work on electricity—and though the subject was entirely new to him, he had, in a very short time, made himself familiar with all the book contained. Some question was started between us in regard to the different degrees of susceptibility which the sleeping and waking condition of the human system might manifest to the influence of electricity. At the time I little suspected his purpose to improve my own bad habit of sleeping in the early hours, for the benefit of science; but the very next morning I waked to find myself the victim of a tremendous dose of lightning, adroitly administered by my fellow-student while I slept. He had skilfully arranged my father's electrical apparatus by the bedside, and given me a dose which satisfied me at least that somnolence was no security against forked lightning."

Dr. Chandler adds, with regard to his knowledge of Dr. Clapp in his later years—"During a short visit to Vermont some two years since, when I had the pleasure of renewing our acquaintance, I found him still the same enthusiastic and diligent student. He was at that time so absorbed in microscopic inquiries, that he hardly allowed himself time for the hospitalities and enjoyments which relatives and old friends were anxious to offer him. Indeed, his travelling outfit seemed to consist mainly of lenses and other apparatus appropriate to the unremitting labor which, at home or abroad, he made the great business of his life. He was eminently distinguished in Indiana, and in New Albany, the city of his early adoption, was no less honored for his professional skill than for his public spirit and his hearty coöperation in every humane enterprise. He was chairman, I think, on an important committee in our National Medical Association, at least wrote the report of that committee, which was published in the Transactions of the Association, and has given a volume to the profession which will be read and valued, long after his old chum is forgotten."

REMARKS ON NITROUS OXIDE AND OXYGEN. *Messrs. Editors*,—Being much pleased with the attention lately given to the use of gases as remedial agents, I wish to offer, through your JOURNAL, the results of some personal observations on the subject.

While working amongst nitrous oxide vapors, some years ago, I noticed that the color exhibited by a scratch on the arm soon changed to a dark purple, almost inky hue, while upon the same person, a few hours before or after, no such result was obtainable.

Was not the difference due to some lower oxide of nitrogen than those which irritate the fauces when inhaled; and if so, was not its action poisonous? Will not such chemical reaction with the blood or some of its elements account for the fatal results of some of the cases reported?

That nitrogen, combined with oxygen, will enter into such reactions readily where free nitrogen will not, and that nitrogen plays an important part in the formation of organic poisons, are points too well understood to need comment here.

Again—these vapors, when freely imbibed *on a full stomach*, acted like a small quantity of vapor from the decomposition of cyanides, producing with its contents a mass of mucus-like matter, smelling strongly of some modified form of the respective gases. The oxides of nitrogen thus taken induced emesis in the course of a few hours, thus preventing the action upon the food from being so complete as in the case of cyanogen, which was in one instance retained forty-eight hours.

On an empty stomach, unpleasant effects, reminding me of the pain sometimes felt under like circumstances during the cholera epidemic, deterred me from entering into close investigations. Notwithstanding this, cases may occur in which the introduction of nitrogen into the system will be desirable, and in such cases it will doubtless be more readily assimilated if given in connection with oxygen, as in the nitrous oxide.

It may be added here, that as a hue tending to black indicates excess of carbon in the blood, so a more purple hue may indicate excess of nitrogen, both calling for oxygen as a restorative.

One of the ablest physicians of Mississippi informed me that the large quantities of supercarbonate of iron he directed were intended *solely as a means of conveying oxygen into the system*, and he often experienced difficulty in giving as much as he desired, on account of the purgative action superinduced mechanically by the deoxidized iron, believing that a portion of the metal was entirely deoxidized in some cases. Another Southern physician once made some similar observations in regard to the muriated tincture of iron, although, if I remember rightly, he wished mild purgative action to follow its administration.

Why is it that of those who have opportunities for doing so, no one has tried oxygen in simple mixtures of various proportions with nitrogen or atmospheric air? Is it because of the difficulties in preparing and conveying it; or only for want of thought? It appears to me that the well-known healthful, vitalizing properties of oxygen should have attracted the attention of those who have been experimenting with ethers of various kinds, quite as much as any remedial agent of a less *natural* character. All know its power as well as its innocuous character, and injury can result from its use only when too freely administered, or when a deficiency of carbon in the system, as in consumption, may occasion its combination with other elements in the tissues, thus leading to the destruction of the tissues themselves.

Allow me to call attention, in this connection, to the remarks upon *phthisis pulmonalis*, in your issue of Jan. 22d, by Dr. Amos Sawyer, of Illinois; all the points presented by him being supported by my own observations, both near the Atlantic coast and in the Southwest-

ern States. And, further, I would venture the opinion that a warm carbonaceous diet, combined with constant and vigorous out-door exercise, will cure any "consumptive" able to bear such exercise. But such a diet, unless accompanied by at least as much exercise as may be necessary to sustain a hearty appetite, will be very likely to be followed by some ill effects; and in some, especially those using pork as an article of food, much more severe exercise in the open air will be requisite.

Possibly, actual experiment may demonstrate that the artificial exhibition of oxygen in the sick room, in connection with such a diet, may be the means of saving consumptive patients; but for obvious reasons, before alluded to, great care will be requisite in opening such a course.

Yours, very respectfully,

AN EX-SOUTHERN APOTHECARY.

GARIBALDI'S WOUND—M. NELATON'S CLINICAL REMARKS.—On the 23d ult., M. Nélaton received from the Prefect of Pisa the following telegram:—"This morning, at ten, Professor Zanetti removed the ball from the General's foot. All honor to your diagnosis." Respecting this favorable result, M. Nélaton made the following remarks to his class at the *Hôpital des Cliniques*:—

"When we consider the variety of opinions which have been offered respecting the presence of a foreign body in the wound, it is evident that the favorable result lately obtained would have been long delayed had we not means of accurate diagnosis. Let me remind you that the wound is on a level with the anterior edge of the inner malleolus, which latter has been fractured by the ball; the wound runs in a transverse direction, and the probe, introduced about one inch into it, came in contact with a hard body. The sound heard on striking was dull, and very unlike that produced by meeting with necrosed or carious bone. The ball was lodged in front of the neck of the astragalus, though its presence could not be detected by examination of the instep in consequence of the tension of parts in that region. I was, however, perfectly certain that the ball was there, and advised gradual dilatation. But M. Porta, who explored with his finger, did not agree with me.

"On my return to Paris, I endeavored to contrive exploring instruments which should convince those who were not of the same opinion with myself. I thought, first, of a sound ending in a kind of file, which could take off a few metallic particles. I had some constructed; but M. E. Rousseau gave me the idea of an instrument which would bring away particles of metal. We had, therefore, a probe made, to the end of which was fixed an olive-shaped body, made of unpolished china, upon which mere contact would leave a mark of the projectile, and prove its presence. M. Charrière made several instruments of this kind, composed of a silver stem, ending in a china knob. The mere rubbing of this instrument against lead is sufficient to make a stain, which neither the soft parts nor the morbid secretions could obliterate; a simple rotation of the instrument upon its axis fixes upon it a kind of meridian.

"But affirmations of mine are not sufficient—proof is the main thing; nor has this been wanting, for with this instrument, Professor

Zanetti became so certain of the presence of the ball that he forthwith extracted it.—*London Lancet*, Dec. 6, 1862.

THE DANGERS OF HOME DOCTORING.—A Surgeon of Birmingham recently prescribed, for a woman of that place, a medicine containing morphia, for the cure of a cough, which had the desired effect. Shortly afterwards, on her infant suffering likewise from cough, the woman administered to it "some" of the medicine, which was attended with a fatal result. The coroner's jury which was summoned on the occasion, apparently wishing to avoid casting censure either on the surgeon or the mother, returned the singular verdict, "Died by the visitation of God."—*London Lancet*.

THE anniversary meeting of the Woman's Hospital Association was held in New York on the 31st ult. Over 400 out-door patients received medical and surgical aid during the last year, gratuitously, besides the free list in the hospital. Dr. J. Marion Sims was the founder of this institution; and he and Dr. Thomas Addis Emmet are now its surgeons, the latter having charge of it.

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, FEBRUARY 7TH, 1863.
DEATHS.

	Males.	Females.	Total.
Deaths during the week	50	23	73
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.0	35.4	76.4
Average corrected to increased population	00	00	84.23
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
9	8	3	5	0	0	2	3

TO SUBSCRIBERS.—Owing to the great amount of other work in the JOURNAL office, the printing of the Index to Vol. LXVII. has been delayed, and is not yet finished. As soon as completed, the sheet will be forwarded to subscribers as usual.

TO CORRESPONDENTS.—A paper on the Treatment of Diphtheria, by Dr. C. S. Elliot, of North Sidney, Cape Breton, has been received.

MARRIED.—At Cambridge, 7th inst., Dr. Edward B. Dalton, U.S.A., to Sarah H., daughter of the late Warren Colburn.

DIED.—In Coxsackie, N. Y., on the 22d ult., Dr. Henry Collier, in the 31st year of his age. Dr. C., while a practising physician in the town of Athens, N. Y., received the appointment of Assistant Surgeon of the 120th Regiment N. Y. Vols. Although then in good health, the arduous duties and the exposures of a few months brought on a fever, on the subsidence of which consumption fastened upon him and rapidly brought him to the grave. Dr. C. was well educated, unexceptionable in character, of rare qualifications as a physician, and died greatly lamented.

DEATHS IN BOSTON for the week ending Saturday noon, Feb. 7th, 73. Males, 50—Females, 23.—Accident, 1—apoplexy, 2—disease of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—cancer (of the stomach), 1—consumption, 9—convulsions, 2—croup, 8—diarrhoea, 1—diphtheria, 3—dropsy of the brain, 2—scarlet fever, 3—typhoid fever, 2—disease of the heart, 3—disease of the hip, 1—hypercatharsis, 1—infantile disease, 3—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 5—pistol-shot in the lungs, 1—marasmus, 2—old age, 3—premature birth, 1—rheumatism, 2—sore throat, 3—suicide, 1—toxicoemia, 1—unknown, 6.

Under 5 years of age, 30—between 5 and 20 years, 4—between 20 and 40 years, 25—between 40 and 60 years, 6—above 60 years, 8. Born in the United States, 54—Ireland, 13—other places, 6.